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PHOTOGRAPHIC INTERPRETATION REPORT

EMBA MISSILE-ASSOCIATED INSTALLATION, USSR

CHANGES SINCE [redacted]

25X1D

NPIC/R-191/64
March 1964

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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PREFACE

This report has been prepared in response to NPIC requirement PC-23/64, NSA requirement NSA/P043/R 3-64, and CIA requirement C-SI4-80,940, which requested updating of photographic interpretation information on the Emba Missile-Associated Installation, USSR.* 1/ Since the small scale of the [redacted] photography used for this report restricts image definition, all mensural data should be considered approximate.

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INTRODUCTION

The Emba Missile-Associated Installation* (Figure 1) is located south of the town of Emba, on the Kazakh railroad system, and is served by a rail spur and road from the town. This missile-associated installation was first observed under construction on [redacted] Mission [redacted], and has since been observed [redacted] missions. This report is based primarily on a study of the [redacted] photography [redacted] Mission [redacted] and describes changes since the last coverage in [redacted]

As described in NPIC/R-159/63, 1/ this installation appears to be a new research and development facility. It includes a probable launch area with its associated support facilities; instrumentation and electronics facilities; and separate administrative and logistical support facilities (Figure 2).

*Table 1 gives coordinates for the components of the installation.

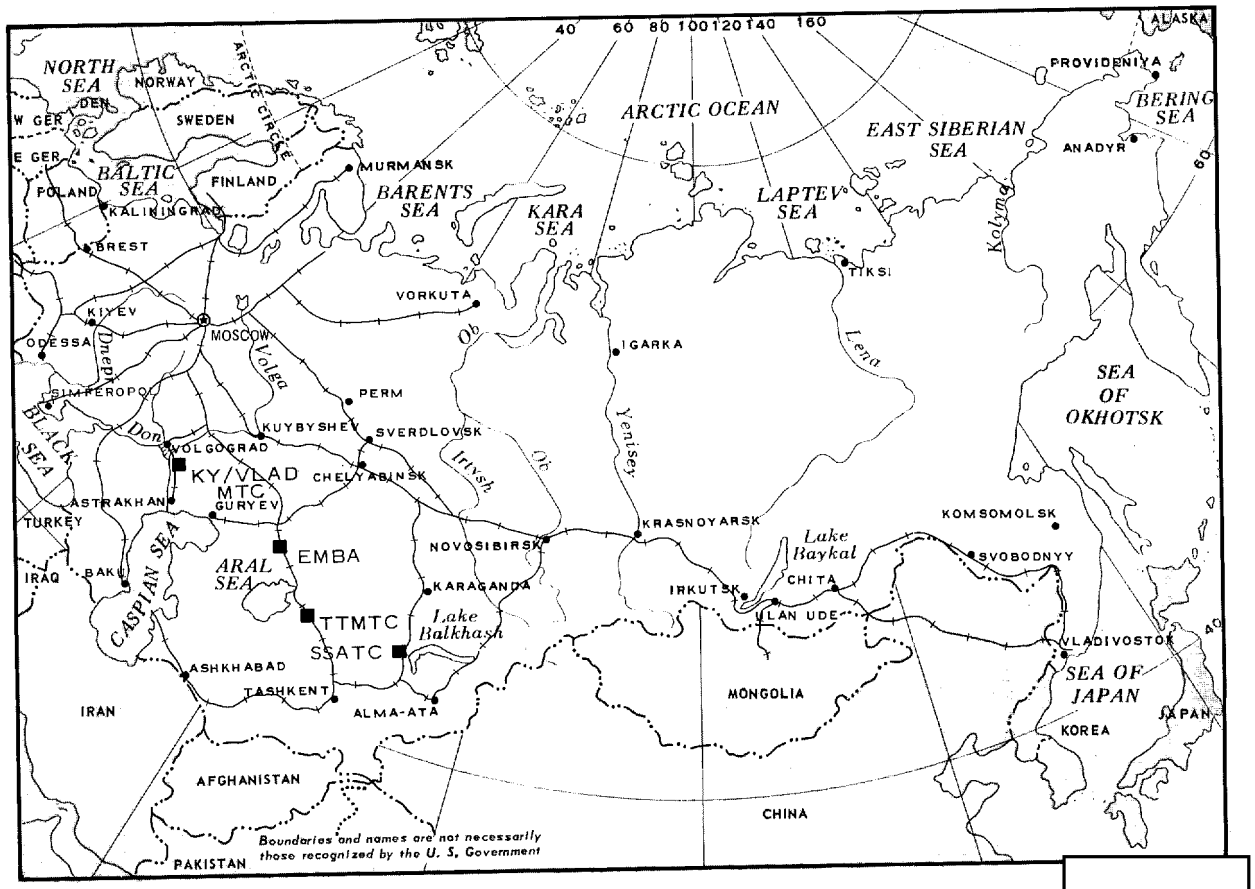

FIGURE 1. LOCATION OF EMBA MISSILE-ASSOCIATED INSTALLATION.

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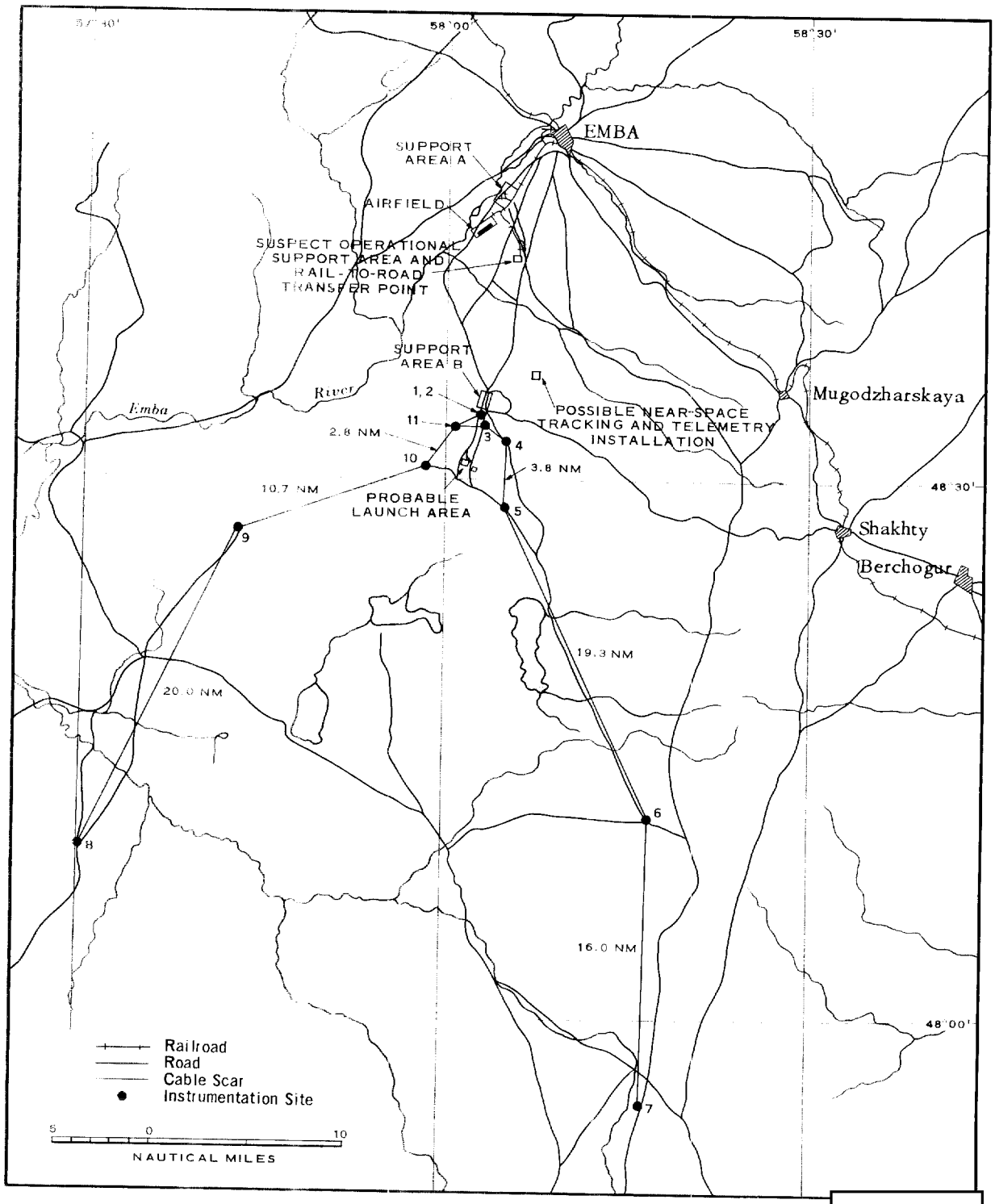

FIGURE 2. LAYOUT OF FACILITIES, EMBA INSTALLATION.

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Table 1. Geographic Coordinates of Components of Emba Missile-Associated Installation

Launch-Associated Facilities	
Probable Launch Area	48-31N 58-01E
Support Area B	48-34N 58-03E
Suspect Operational Support Area	48-42N 58-05E
Instrumentation and Electronics Facilities	
Instrumentation Site 1	48-33N 58-02E
Instrumentation Site 2	48-33N 58-02E
Instrumentation Site 3	48-33N 58-03E
Instrumentation Site 4	48-32N 58-04E
Instrumentation Site 5	48-28N 58-04E
Instrumentation Site 6	48-11N 58-16E
Instrumentation Site 7	47-55N 58-16E
Instrumentation Site 8	48-09N 57-30E
Instrumentation Site 9	48-27N 57-42E
Instrumentation Site 10	48-30N 57-58E
Instrumentation Site 11	48-33N 58-00E
Possible Near-Space Tracking and Telemetry Installation	48-36N 58-07E
Administrative and Logistical Support Facilities	
Support Area A	48-46N 58-05E
Emba Airfield	48-44N 58-03E

The launch-associated facilities consist of a probable launch area, a support area (Support Area B), a suspect operational support area, and a rail-to-road transfer point.

The instrumentation and electronics facilities include an instrumentation range extending approximately 35 nautical miles (nm) in a south-southwesterly direction; and a possible near-space tracking and telemetry installation, which has been added since [redacted] 6.5 nm northeast of the probable launch area. 25X1D

The administrative and logistical support facilities, located in the northern part of the installation, include a rail-served support area (Support Area A) and a nearby airfield.

[redacted] photography of [redacted] (Mission [redacted]) shows continuing expansion at the Emba Missile-Associated Installation since [redacted] The major increases have been the addition of a possible near-space tracking and telemetry installation; the construction of new buildings and a probable rail spur in Support Area A; and the installation of security fencing at instrumentation sites 6, 7, 8, and 9. 25X1 25X1D 25X1D 25X1D 25X1D

The town of Emba, at 48-49N 58-09E (Figure 3), shows expansion in two areas. Fourteen probable barracks have been erected in a possible military area in the northeast part of the town. In the northwest part of town, adjacent to the rail spur which serves the missile-associated installation, two new warehouses have been constructed beside two others which were present in [redacted] 25X1D

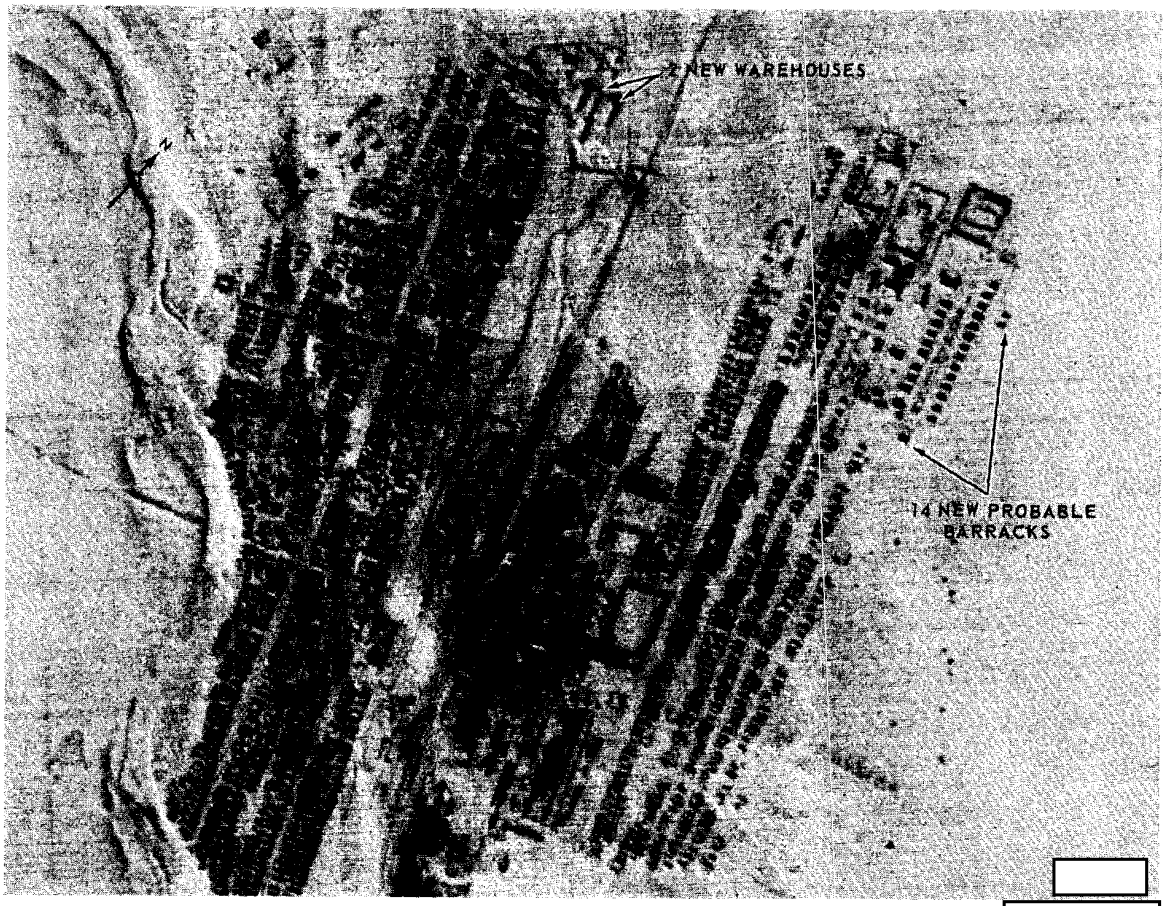
Additional information which may be significant is that the approximate midpoint of a projected line of flight from the Kapustin Yar/Vladimirovka Missile Test Center (KY/Vlad MTC) to the Sary-Shagan Antimissile Test Center (SSATC) 1,050-nm impact area is over the approximate center of the instrumentation pattern of the Emba Missile-Associated Installation.

LAUNCH-ASSOCIATED FACILITIES

PROBABLE LAUNCH AREA

The probable launch area is located at 48-31N 58-01E (Figure 4), approximately 15 nm south of Support Area A and 3 nm south-southwest of Support Area B. The probable launch area is double-fenced and measures approximately 1,600 by 1,300 feet. The road pattern within the fenced area forms a rectangle approximately 800 by 600 feet with an offset, north-south, center road.

The probable launch pads, previously identified as vehicle hardstands or the initial stages of launch pad construction, and measuring approximately 75 feet square, now appear to measure 100 by 70 feet. A line/conduit can now be



[redacted]

FIGURE 3. TOWN OF EMBA.

seen extending to each pad from the two bunkers/buildings near the northwest corner of the center offset road.

Neither this area nor the smaller possible launch area, located approximately 2,000 feet to the southeast, shows any significant change on Mission [redacted]

SUPPORT AREA B

Support Area B is located at 48-34N 58-03E, approximately 3 nm north-northeast of the probable launch area. The area shows no significant change since [redacted] when it measured 5,000 by 1,600 feet and contained 25 buildings.

SUSPECT OPERATIONAL SUPPORT AREA AND RAIL-TO-ROAD TRANSFER POINT

A suspect operational support area (Figure 5), previously called an unidentified facility, is located at 48-42N 58-05E, approximately 3 nm south-southeast of Support Area A at the terminus of the rail line from Emba. This area is 12 nm north-northeast of the probable launch area and connected to it by road. It is considered to be a suspect operational support area because of the road pattern and building arrangement within the area, and its location at the terminus of the rail line serving the Emba Missile-Associated Installation.

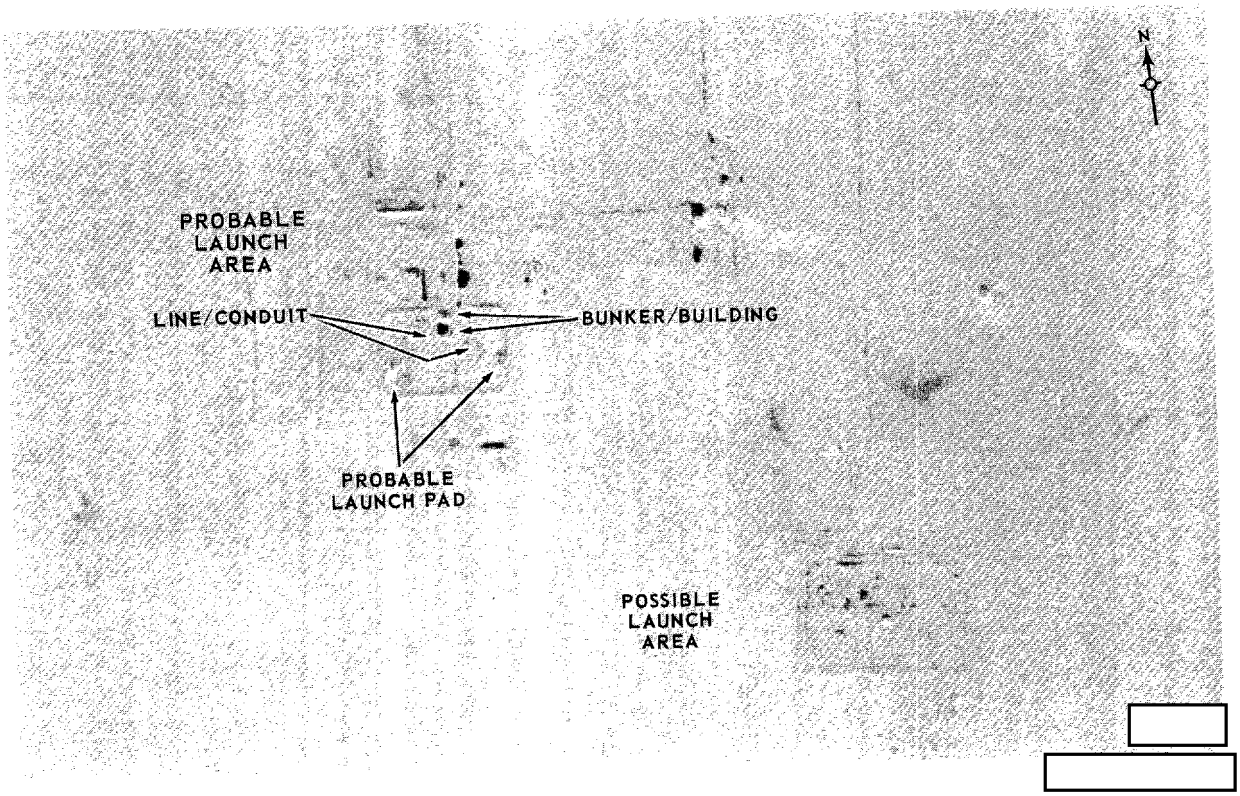


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FIGURE 4. PROBABLE LAUNCH AREA.

The rail-to-road transfer point is located along the east side of the suspect operational support area at the terminus of this rail line from Emba. A rail spur, which was previously identified as the rail-to-road transfer point, branches off this rail line approximately one nm north of the suspect operational support area, and leads south-southeast for a distance of approximately 4,000 feet. Observation of foot/vehicular paths between the suspect operational support area and the rail spur suggests that the latter may serve as a secondary rail-to-road transfer point.

The differences noted in this facility are the addition of a water/waste sludge settling basin, located approximately 1,500 feet south of the suspect operational support area; the identification of a monitor roof on the 170- by 65-foot building, the longest building in the suspect operational support area; and the identification of the rail-to-road transfer point and a possible secondary rail-to-road transfer point.

INSTRUMENTATION AND ELECTRONICS FACILITIES

INSTRUMENTATION SITES

At instrumentation sites 6, 7, 8, and 9 (Figure 6), which are similar in layout, changes since [redacted] include the addition of security fences to each site. Each site now also appears to be divided by a possible fence into separate operations and support sections. Fig-

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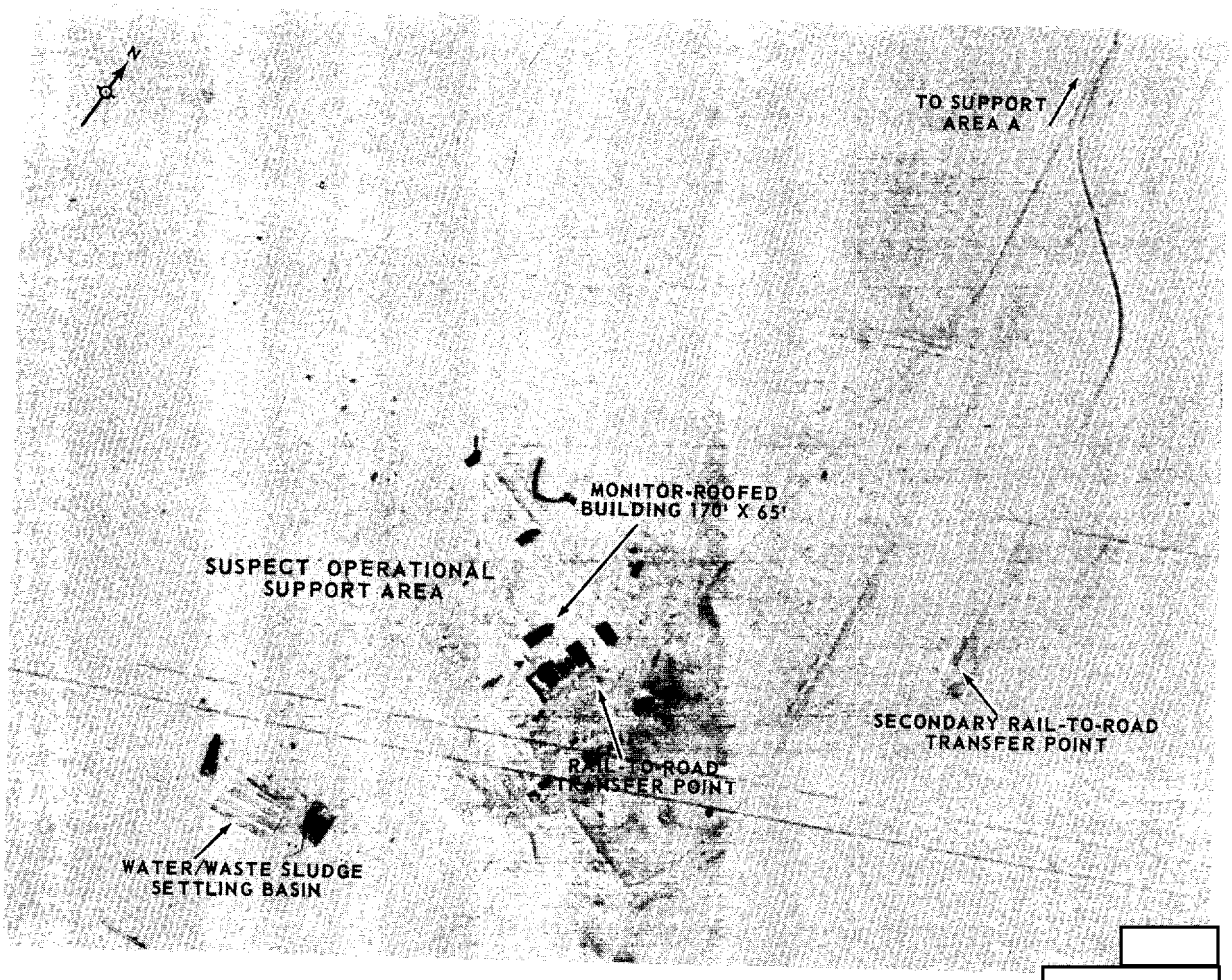

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FIGURE 5. SUSPECT OPERATIONAL SUPPORT AREA AND RAIL-TO-ROAD TRANSFER POINT.

ure 6 shows a line drawing of site 9, which is a typical site. The operations section at each of these sites, and also at site 2, consists of a rectangular building approximately 175 by 50 feet, flanked at each end by two domes approximately 20 feet in diameter, on top of cylindrical towers. These domes were previously identified as square buildings. An imaginary line drawn through the four domes at each site (sites 6, 7, 8, and 9) appears to have a north-south orientation. An unidentified object is located in line with and north of the northern end dome at sites 8 and 9, and south of the southern end dome at sites 6 and 7. This object is always to the left of the line of domes facing the line of flight. A building approximately 70 by 30 feet, which may have a roof-mounted piece of equipment, is located approximately 165 feet west of the gap between the 175- by 50-foot building and the dome to the north at sites 8 and 9. At sites 6 and 7 this structure is located 165 feet east of the gap between the 175- by 50-foot building and the dome to the south. This structure is always located to the left and rear of the 175- by 50-foot

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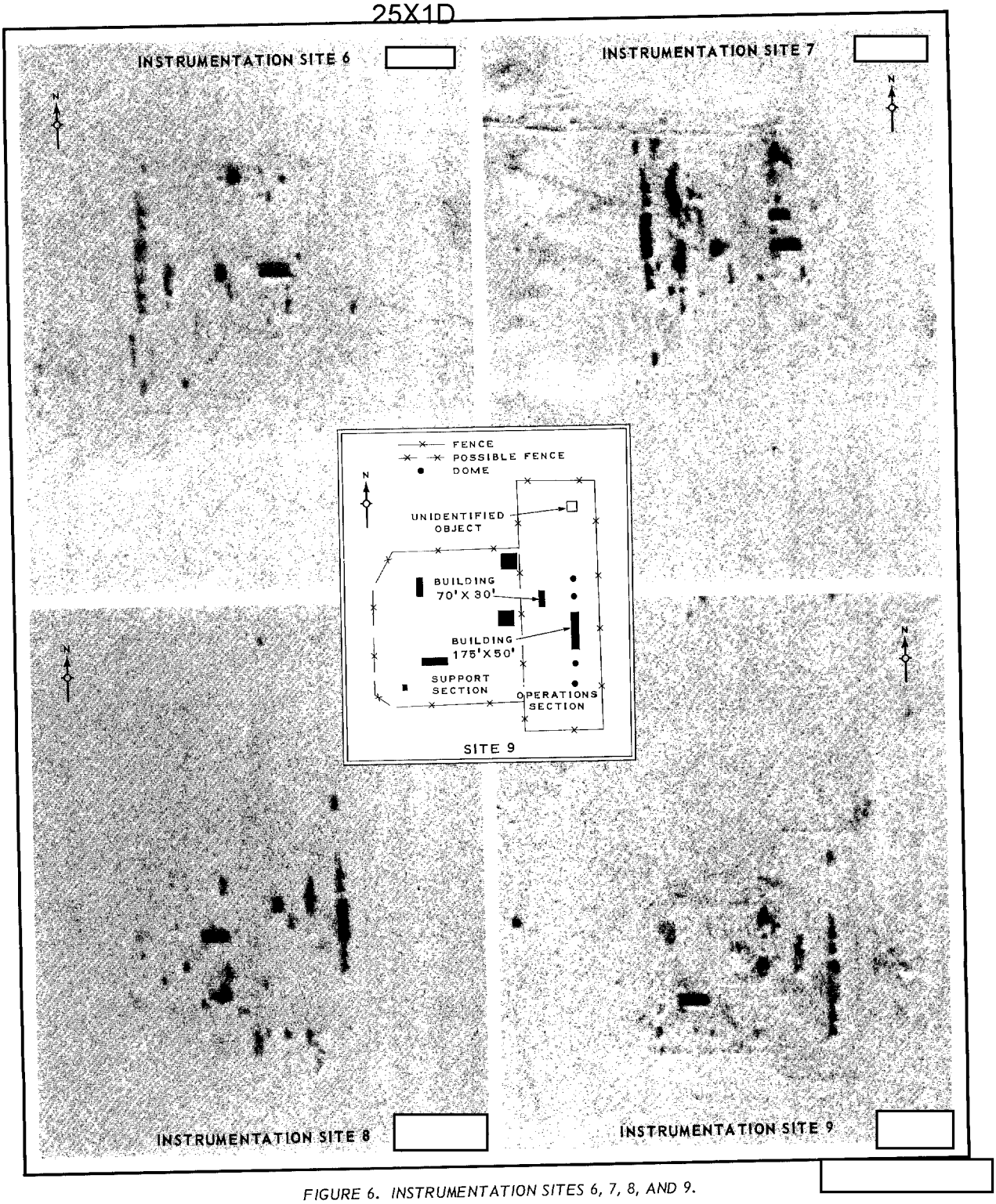

FIGURE 6. INSTRUMENTATION SITES 6, 7, 8, AND 9.

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building facing the line of flight. The support sections of these sites show no apparent changes since [redacted] 25X1D

No apparent changes in facilities can be noted at instrumentation sites 1, 2, 3, 4, 5, 10, or 11. No additional instrumentation sites can be noted downrange from sites 7 and 8.

POSSIBLE NEAR-SPACE TRACKING AND TELEMETRY INSTALLATION

A possible near-space tracking and telemetry installation has been constructed at 48-36N 58-07E (Figure 7), approximately 6.5 nm north-northeast of the probable launch area, [redacted] 25X1D Photographic coverage of [redacted]s this installation to consist of a possible near-space tracking facility, four probable platform or tower-mounted telemetry receiving arrays, and two suspect tracking antennas.

The installation appears to be fenced and measures 1,100 by 1,050 feet. An additional possible fence within this area separates the possible near-space tracking facility from the probable telemetry receiving arrays and suspect tracking antennas.

The possible near-space tracking facility consists of three structures. Two measure 80 by 55 feet, are spaced approximately 440 feet apart, and have equipment mounted on top. The third structure, measuring approximately 45 by 40 feet, is midway between the first two; it is not as high and has no top-mounted equipment. The three structures are aligned on an azimuth [redacted] This facility 25X1D appears similar to a facility observed at SSATC Instrumentation Site 1 on photography of [redacted] 25X1D

The two suspect tracking antennas are mounted approximately 800 feet apart. They appear to be similar to tracking antennas observed 25X1D

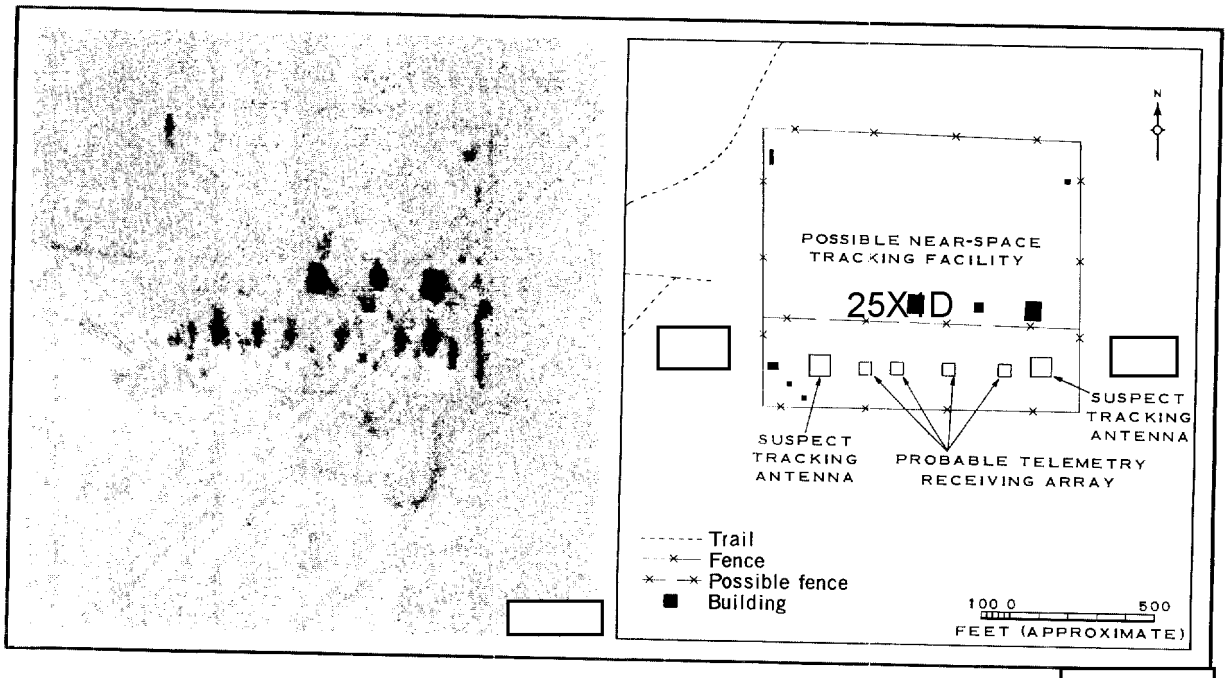

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FIGURE 7. POSSIBLE NEAR-SPACE TRACKING AND TELEMETRY INSTALLATION.

in the Instrumentation Control Center in Launch Complex A of the Tyuratam Missile Test Center (TTMTC). 2/ Between these two suspect tracking antennas are four platforms or towers containing probable telemetry receiving arrays. All six positions are aligned on an azimuth of [redacted] 25X1D

The installation is road served and foot/vehicular paths indicate access both from the road connecting the suspect operational support area and Support Area B, and directly from Support Area B.

ADMINISTRATIVE AND LOGISTICAL SUPPORT FACILITIES

SUPPORT AREA A

Support Area A (Figure 8) is located at 48-46N 58-05E, 4 nm south-southwest of Emba. In [redacted] 25X1D this support area measured 9,000 by 5,000 feet, contained about 114 buildings, and had two sets of rail spurs. It continues to show new construction activity.

New construction within Support Area A consists of 12 multistory administrative or barracks buildings, 7 smaller buildings, and 5 buildings which are still under construction. A tall tower of undetermined purpose is situated southeast of the administrative/housing section.

A probable rail spur leading from the northern set of spurs has been constructed adjacent to the barracks/warehouse section, and apparently contains several railroad cars. Several railroad cars were also observed on a siding near the rail spur entering Support Area A. The southern set of rail spurs also shows an increase in activity with much more open storage in evidence.

The fenced motor pools/storage yards contained in Support Area A show considerably more vehicles or equipment on photography of [redacted] 25X1D photography.

EMBA AIRFIELD

Emba Airfield is located at 48-44N 58-03E, approximately 6.5 nm south-southwest of Emba and 2 nm south-southwest of Support Area A (Figure 9). The airfield is served by the same road and rail system which serves Support Area A.

The only changes at Emba Airfield involve the aircraft count, which now consists of 2 medium transports (straight wing), 16 small unidentified-type aircraft, and 7 helicopters, and the absence of a previously identified electronic landing facility which was formerly located approximately 4,000 feet south-southeast of the southern end of the runway.

It is not possible to determine whether the previously observed 7,500-foot graded-earth runway has actually been extended, but the snow is cleared from the original runway and for approximately 2,500 feet, giving a total length of approximately 10,000 feet which is cleared of snow.

No other changes in facilities at the airfield can be noted.

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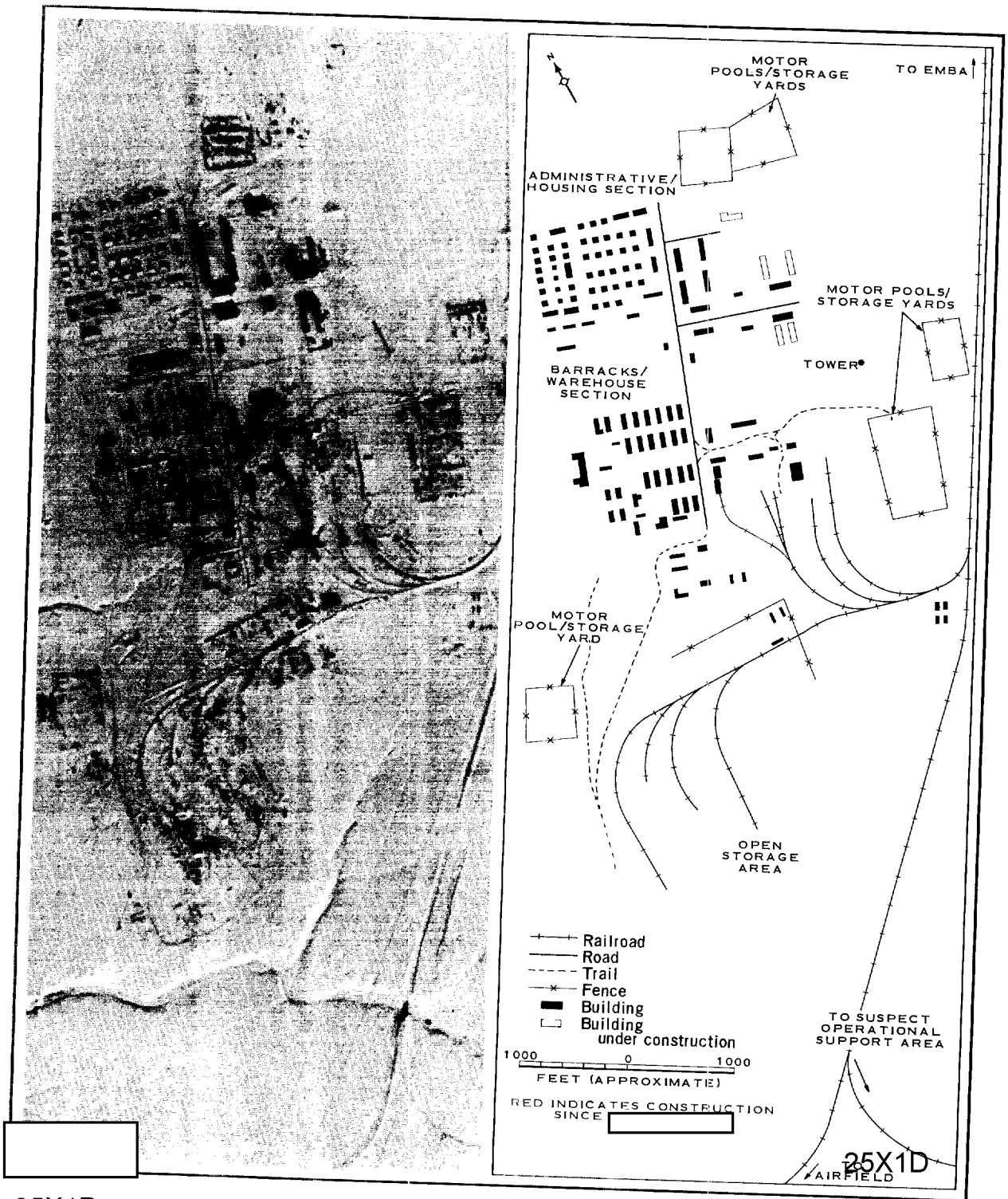

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FIGURE 8. SUPPORT AREA A.

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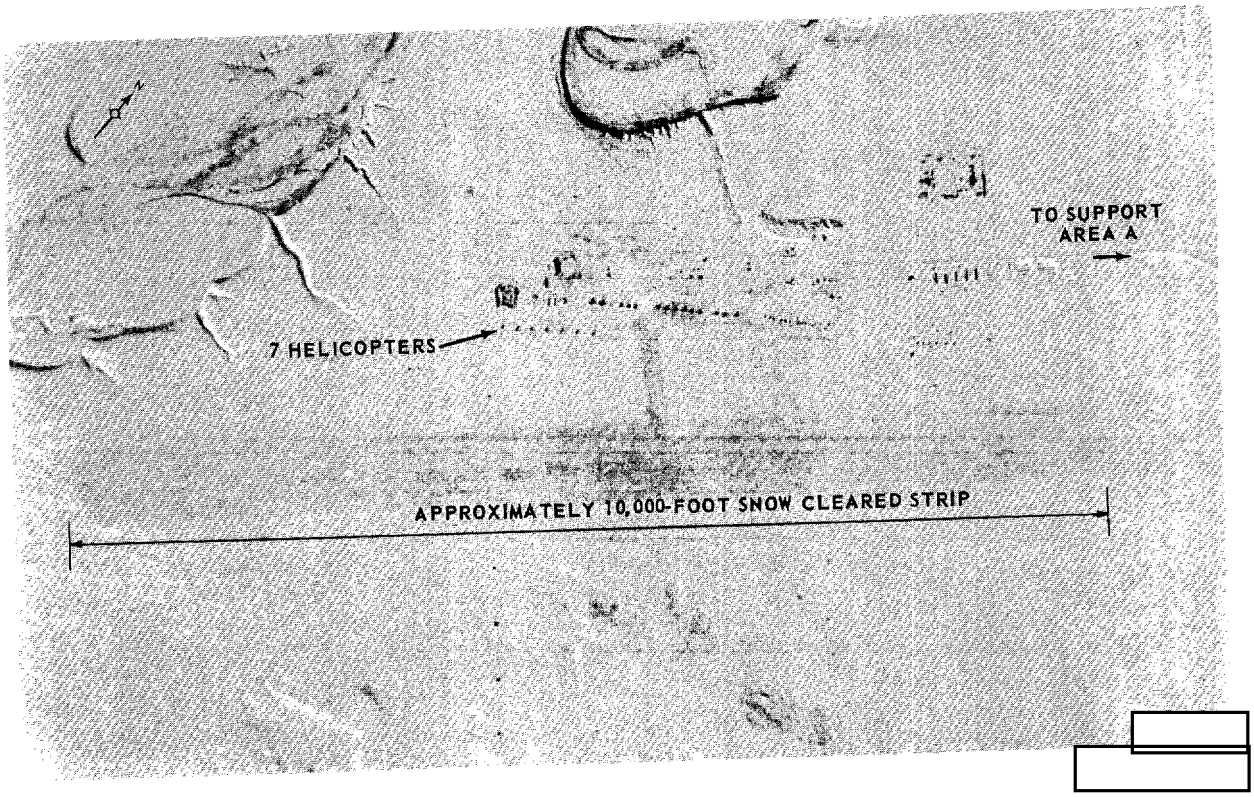

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FIGURE 9. EMBA AIRFIELD

PHYSICAL RELATION TO KY/VLAD MTC - SSATC FLIGHT PATH

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KY/Vlad MTC Launch Complex C is located at 48-36N 46-16E. The coordinates of the approximate center of the 1,050-nm impact area at SSATC 3/ are 46-16N 72-01E. A line connecting these two installation, plotted on a gnomonic projection, represents the flight path or great-circle route between them. It passes approximately 20 nm south of the Emba probable launch area (48-31N 58-01E) and through the approximate center of the Emba instrumentation pattern, which is located at the approximate midpoint of the flight path (Figure 10).

The azimuth of this flight path is [redacted] degrees, which is perpendicular to the long axis of the probable pads of the Emba probable launch area. The flight path parallels the long axis of the possible near-space tracking facility, and the line of the probable telemetry receiving arrays and the suspect tracking antennas.

The positioning and facilities of the Emba Missile-Associated Installation may suggest activity involving KY/Vlad MTC-launched missiles at midrange and/or apogee position on a flight path of SSATC.

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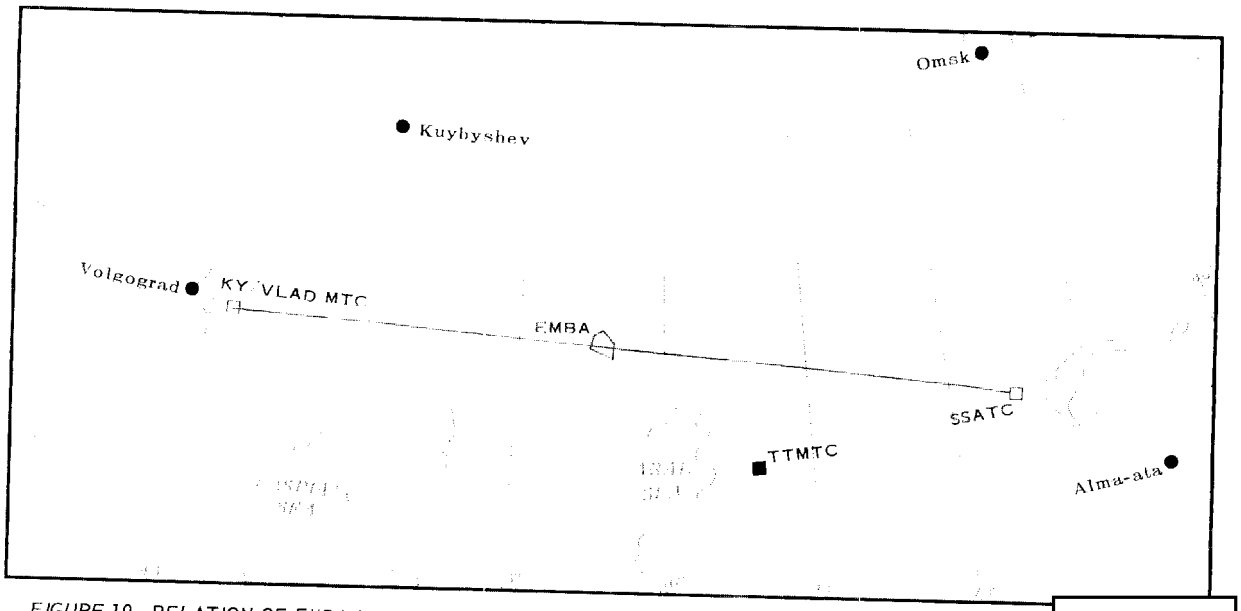

FIGURE 10. RELATION OF EMBA INSTALLATION TO THE KY/VLAD MTC -- SSATC FLIGHT PATH, SHOWN ON GNOMONIC PROJECTION.

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REFERENCES

PHOTOGRAPHY

25X1D [redacted]

MAPS OR CHARTS

USAF. Special Gnomonic Tracking Chart GT 44S (E), Nov 51, revised Feb 57 (CONFIDENTIAL)

SAC. US Air Target Chart, Series 200, Sheet 0235-22HL, 4th ed, May 63, scale 1:200,000 (SECRET)

DOCUMENTS

1. NPIC. R-159/63, Missile-Associated Facility Near Emba, USSR, Jul 63 (TOP SECRET [redacted] 25X1
2. NPIC. R-315/63, Launch Complexes A and E, Tyuratam Missile Test Center, USSR, Changes Since [redacted] 25X1D Dec 63 (TOP SECRET [redacted] 25X1
3. CIA. PIC/JR-3/61, Antimissile Test Complex, Sary Shagan, USSR, Changes Since [redacted] Apr 61 25X1D (TOP SECRET [redacted] 25X1

REQUIREMENTS

NPIC. PC-23-64

CIA. C-SI4-80,940

NSA. NSA/P043/R3-64

NPIC PROJECT

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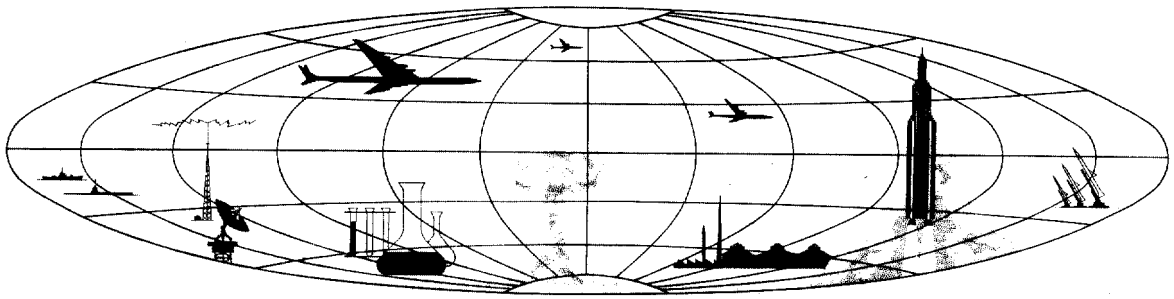

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